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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,381	09/10/2003	Rong-Chang Liang	07783.0080.NPUS00	6021

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EXAMINER	
THOMPSON, TIMOTHY J	

ART UNIT	PAPER NUMBER
2873	

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/660,381	LIANG ET AL.	
	Examiner	Art Unit	
	Timothy J. Thompson	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 January 1960*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-62* is/are pending in the application.

4a) Of the above claim(s) *33-62* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,22-25 and 32* is/are rejected.

7)☒ Claim(s) *5-21 and 26-31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 07/2004; 07/2005.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnoldussen(U.S. Pat. No. 4,277,147) in view of Jagt et al. (U.S. Pat. Pub. No. 2006/0066933).

Regarding claim 1, Arnoldussen discloses electrochromic or electrodeposition display having a plurality of cells, each of said cells(fig 1) having (a) surrounding partition walls(fig 1, 28) (b) an electrochromic fluid or electrolytic fluid filled therein(fig 1, 30), a polymeric sealing layer(fig 1, 24) which encloses the electrochromic fluid or electrolytic fluid within each cell and sealingly adheres to the surface of the partition walls(fig 1). Arnoldussen does not disclose a plurality of cells. However, Jagt et al. discloses a plurality of cell so as to form a electrochromic display(fig 4). It would have been obvious to one skilled in the art at the time of the invention to use a plurality of cells as shown by Jagt et al., with the electrophoretic device of Jacobson et al., since as shown by Jagt et al. a plurality of cells is commonly used so as to form inages.

Regarding claim 2, Arnoldussen does not disclose the electrochromic fluid is partially filled. It would have been an obvious matter of design choice to form the

polymeric layer running between the two layers and not extending above the partition walls as apposed to running the polymeric layer between the two wall but instead laying the layer on top of the two walls, since the applicant has not disclosed that running the polymeric layer between the two layers and not extending above the partition walls solvesd any stated problemor is for any particular purpose and it appears that the invention would perform equally well with running the polymeric layer between the two wall but instead laying the layer on top of the two walls, and the fluids being partially filled is a direct result to how the ploymeric layer is placed.

Regarding claim 3, Arnoldussen discloses said polymeric sealing layer is in contact with said partially filled electrochromic fluid or electrolytic fluid(fig 1).

Regarding claim 4, Arnoldussen discloses said electrolytic fluid comprising a metal salt dissolved in a solvent or in a polymer matrix(col 3, lines 40-65).

Claims 1-3, 22-25, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobson et al.(Pat. Pub. No. 2003/0096113 in view of Amigo et al.(WO 98/12530).

Regarding claim 1, Jacobson et al. discloses electrochromic or electrodeposition display having a plurality of cells, each of said cells(fig 11A) having (a) surrounding partition walls(fig 11A, 110,·1142) (b) an electrochromic fluid or electrolytic fluid filled therein(fig 11A, 1144). Jacobson et al. does not disclose a polymeric sealing layer which encloses the electrochromic fluid or electrolytic fluid within each cell and sealingly

adheres to the surface of the partition walls. However, Amigo et al. discloses a polymeric sealing layer which encloses the electrochromic fluid or electrolytic fluid within each cell and sealingly adheres to the surface of the partition walls(page 4, lines 20-30) stating this it is solid and rigid and adds to the strength to aid in the support of the device(page 5, lines 4-10). It would have been obvious to one skilled in the art at the time of the invention to coat the walls with a polymeric material which encloses the electrochromic fluid or electrolytic fluid within each cell and sealingly adheres to the surface of the partition walls as shown by Amigo et al., with the electrophoretic device of Jacobson et al., since as shown by Amigo et al. coat the walls with a polymeric material which encloses the electrochromic fluid or electrolytic fluid within each cell and sealingly adheres to the surface of the partition walls is commonly done so as to add strength to the walls.

Regarding claim 2, Jacobson et al. discloses said electrochromic fluid orelectrolytic fluid is partially filled(the fluid would have to be partially filled as compared to the container that doe not have the polymeric coating since two materials cannot occupy the same space at any given time).

Regarding claim 3, Jacobson et al. discloses said polymeric sealing layer is in contact with said partially filled electrochromic fluid or electrolytic fluid(the sealing layer would inherently in contact with the fluid since the polymer coats the partition walls).

Regarding claim 22, Jacobson et al. discloses a) a top electrode plate*(fig 11A, 1102) and a bottom electrode plate(fig 1A, 1130), at least one of which is transparent; and(para 0182) b) a plurality of cells enclosed between the two electrodes(fig 11A),

each of said cells(fig 11A) having (a) surrounding partition walls(fig 11A, 110, 1142) (b) an electrochromic fluid or electrolytic fluid filled therein(fig 11A, 1144). Jacobson et al. does not disclose a polymeric sealing layer which encloses the electrochromic fluid or electrolytic fluid within each cell and sealingly adheres to the surface of the partition walls. However, Amigo et al. discloses a polymeric sealing layer which encloses the electrochromic fluid or electrolytic fluid within each cell and sealingly adheres to the surface of the partition walls(page 4, lines 20-30) stating this it is solid and rigid and adds to the strength to aid in the support of the device(page 5, lines 4-10). It would have been obvious to one skilled in the art at the time of the invention to coat the walls with a polymeric material which encloses the electrochromic fluid or electrolytic fluid within each cell and sealingly adheres to the surface of the partition walls as shown by Amigo et al., with the electrophoretic device of Jacobson et al., since as shown by Amigo et al. coat the walls with a polymeric material which encloses the electrochromic fluid or electrolytic fluid within each cell and sealingly adheres to the surface of the partition walls is commonly done so as to add strength to the walls.

Regarding claims 23, 24, Jacobson et al. does not disclose the thickness of the bottom of said cells is less than about 2gm or even less than 1gm. It would have been obvious to one having ordinary skill in the art at the time of the invention to form the thickness of the bottom of the cell to less than about 2gm or even less than 1gm, since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claims 25, Jacobson et al. discloses cells are formed of a composition comprising a thermoplastic, thermoset or a precursor thereof(fig 1, 28, which is a neoprene and Heasley(U.S. Pat. Pub. 2006/0177796) discloses neoprene is a type of a thermoplastic material para 0185)

Regarding claims 32, Jacobson et al. discloses polymeric sealing layers are formed of a composition comprising a thermoplastic, thermoset or a precursor thereof(fig 1, 24, which is a vinyl alcohol and Yamana et al.(U.S. Pat. Pub. 2006/0177669) discloses vinyl alcohol is a type of a thermoplastic material para 0003)

Allowable Subject Matter

Claims 5-21, 26-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. With the allowable features being the specific materials used taken in light of the structural limitation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Thompson whose telephone number is (571) 272-2343. The examiner can normally be reached on 8:30 AM - 6:00 Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on (571) 272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).